SECURE SYSTEM FOR RESIDENTIAL APARTMENTS TO KEEP LOGS OF VISITORS

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ABSTRACT: In this Paper we propose a system for Residential buildings in the cities to keep log of their everyday visitors in the residency. With the analysis, we find that manual system in the residency which keeps log of them by manually entering their details into the sheets or excel format which is not ideal solution. To end this, we propose a application where admin or security guard keeps records of owners of the society and daily visitors in the society. As well as for those who are visiting residency occasionally. We can fill their information on visitor's page with a biometric scanning can be done through application. Just to verify the person's identity. Resident can also access the application through their android device. With this when this person visits again into the society, we can verify that person identity for controlling access to the society through information stored into the SQLite database.

***KEYWORDS*: Access control, Application, biometric scanning, Android Device**

I. INTRODUCTION

Now a Days, the world has changed. Workplace violence, industrial espionage and global terrorism threaten the security of personnel and property. When facility entrances aren't secure, Public Resident are vulnerable – and liable. Visitor management is about controlling access, knowing who's in the building, and making owners accountable for their visitors. visitor management system that comprises software tools and Identity validation. When building a security architecture, the primary focus is on reducing vulnerabilities. Need of this topic is for Residential Building Security. To overcome Intentionally or unintentionally loss of data. This system uses a fingerprint scanner/reader to scan the guest's fingerprint and update his/her registering process in the database accordingly. The database can then be queried in order to find the guests with minimum time. And because of this fingerprint scanner the security of apartment is more secure. And the family members are can be added into the database in the registering process. For the new visitors in the resident we can create new account do biometric scanning for secure information into the application database and we can also send message to the owner to verify identity of the person. If the owner allows then only, we give access to the person into the residency otherwise they are not allowed to enter into the residential building. This way we can achieve the efficient and more secure visitor tracking method for the Residential societies.

II. AIM OF PROJECT

The aim of this project is to develop an intelligent visitor tracking system that will help the visitor to enter their identity information into application.

III. SCOPE OF PROJECT

This project can be used by any residency to keep records of visitors by securing their identity through biometric scanning or capturing photo of that particular visitor. To send message to the owner if resident is not available online, we can also provide facility for offline calling to verify identity of visitor.

IV. MOTIVATION

1. To develop the biometric access control system for managing visitors and the resident's information at one place. For existing users validates their entry into database of application as well as with the fingerprint scanning.
2. Completely eliminating manual work by keeping details of Residents and their visitors into database. And verify the identity of visitor by sending the message to the owner or you can call to the respective person to crosscheck their identity. If owner allows the only security guards can give access inside residency otherwise entry is prohibited.

V. OBJECTIVE

- To automate the manual system
- To store and process the residential information at one place
- To provide reliable record maintenance
- To track the actual visitor with proper authentication

VI. PROBLEM DEFINITION

Development of android application for residential apartments for keeping up the logs of guests, to overcome the manual registering process and look after the tolerating crime and theft.

VII. LITERATURE SURVEY

1. **Paper Name and Author:** T. Higuma ; M. Inoue ; K. Nanjo ; S. Suzuki ; T. Kobayashi "**System Architecture and Interface for an Apartment management system**" IEEE International Conference on Consumer Electronics in 1994.
   This paper describes the system architecture of the "Apartment Management System"(AMS). Apartment blocks have a verity of uses such as dormitories, old people's homes and holiday apartments. These apartments require Facility Management Systems (FMS) with functions according to the apartment k use. Individual developments and products of facility management systems for each specific apartment requires extra costs. We propose that AMS be used as a FMS for apartments as it requires no expensive customizing.

2. **Paper Name and Author:** Srinivas Nidhra , Likith Poovann and Vinay Sudha Ethiraj "**Visitor Schedule Management System- An Intelligent Decision Support System**" International Journal on Cybernetics & Informatics (IJCI) Vol.1, No.2, April 2012.
   This papers aim is to intelligently design a support system for a visitor whose major concern is on management of time and meeting the customer priority wise. The Intelligent decision support system a designed is an Expert System. We optimized the visitor's time management without compromising on meeting high priority clients on time as per confirmation. they have used genetic algorithm for visitor's scheduling management. Since the system is a rule-based system, we had to follow certain rules to accomplish the task of managing the visitor's schedule.

3. **Paper Name and Author:** Piyush Devikar, Ajit Krishnamoorthy, Aditya Bhanage, Mohit Singh Chauhan, ''**IoT Based Biometric Attendance System**,'' International Journal of Advanced Research in Computer and Communication Engineering in oct. 2016
   In paper presents a system that records the attendance making use of biometric scanners and stores them securely over cloud in the form of Google Spreadsheet can help resolve issues. The system consists of a fingerprint scanner which is used for ascertaining a student's identity. If the fingerprint scanned matches with records present in the database, attendance is granted to the student by updating to the Google Spreadsheet which is then compared with the data enrolled in the database. If the entered data matches with the already existing data, the attendance of particular person is marked present.

4. **Paper Name and Author:** Benfano Soewito, Ford Lumban Gaol, Echo Simanjuntak, Fergyanto E. Gunawan''**Attendance System on Android Smartphone**,'' 2015 International Conference on Control, Electronics, Renewable Energy and Communications (ICCEREC).
   This paper, introduces an attendance system using fingerprint and GPS (Global Positioning System) on smartphone or mobile devices. Fingerprint attendance machine is one type of biometric attendance machine that uses fingerprint detection methods through employee to record employee attendance list. This type of fingerprint becoming known and used since 1997. Inventors and creators of technology realize that attendance machine fingerprint is one part of the human body is unique and different from each other. In fact, even identical twins have different types and shapes of different fingerprints. This is the trigger for the emergence of the idea of integrating the fingerprint attendance machine. But attendance system using this fingerprint cannot eliminate the problem of long queues at entry work and also at the time out of work. Therefore, we introduced an attendance system-based finger print technology and GPS using a smartphone that will eliminate the problem of long queues. Our research also based on prediction that in a few years all the smart phone will have a fingerprint scanner.

5. **Paper Name and Author:** http://adda.io/blog/2016/12/apartment-security-visitor-management/, ''**Visitor Management in Apartment Complexes: Still in Stone Age**?'' accessed in sept 2018.

   In a survey conducted by ADDA, more than 65% Apartment Residents responded that Security is the main reason that they chose Apartment Living. While more than **25% of the Maintenance Expense is budgeted for Security**, the Gate

Management in a Gated Community happens using the earliest of tools – The Register. The information of every outsider coming into the Apartment Complex is captured in The Register.The handwriting is often illegible making the information captured useless.Apartment Visitors often provide invalid phone numbers, which again renders the information useless. The Information captured in the Register is very difficult to search in case an Incident Investigation needs to be done.

VIII. EXISTING SYSTEM APPROACH

In the existing system the information in the register is not interfaced with the Apartment Resident so they can raise an alert in case there is an anomaly (e.g., a Visitor daily enters taking the name of a locked flat). Capturing the Visitor data in a Register with full history available right at the Gate makes the data vulnerable to misuse. This is also another reason that many Visitors do not provide their genuine details. Typical Gated Communities can have anywhere from 5 to 35 Registers! With the regular change in the Security Team personnel, there is high training effort to ensure the Guards know who to be entered in which Register.

fig: manual visitor information system

IX. PROPOSED SYSTEM APPROACH

In order to overcome the drawbacks in existing system, in that, firstly propose a system for identifying and tracking the visitors into the society through android application where at the entrance visitor has to fill details with biometric fingerprint which generates an account of the visitor. Again, verifying identity of visitor by calling the owner or resident of the society by sending a message or offline calling can also be done through the system. For daily visitor has to check their biometric entry into the residency. Which further results in more secure residential management system.

System Architecture

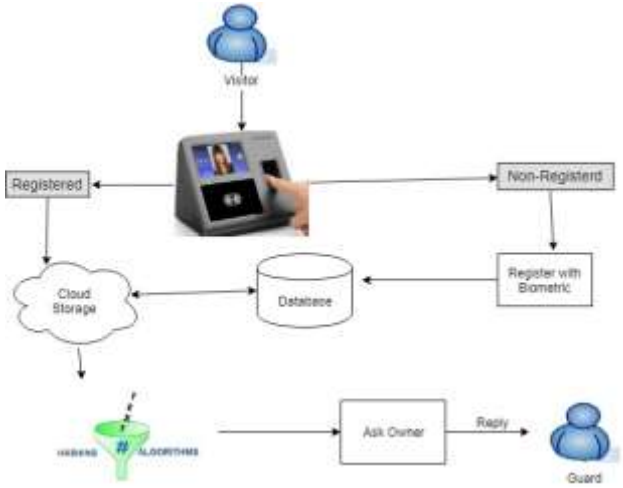

fig: block diagram of the proposed system

Advantages of Proposed System:

1. Secure System for Residential Apartments is a simple, perfect and secure Visitor Management System for processing and storing residential information at one place.
2. Such records will be very useful in case of some eventuality and if an identity of a visitor is required at a later date. This are some of the features of Visitor tracking System.

X. CONCLUSION

In that, we propose a Secure System for Residential Apartments to keep logs of visitors. With the Development of android application for residential apartments for keeping up the logs of guests, to overcome the manual registering process and look after the tolerating crime and theft.

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